

ABSTRACT OF THE DISCLOSURE

A semiconductor substrate processing apparatus and method form interconnects by filling a circuit pattern groove and/or a hole formed in a semiconductor substrate with a plated metal film and removing the plated metal film while leaving the metal film at the filled portion. The apparatus has a carry-in and carry-out section for carrying in and carrying out a semiconductor substrate, which has a circuit formed on a surface thereof, in a dry state. A plated metal film forming unit forms a plated metal film on the semiconductor substrate which has been carried in. A bevel etching unit etches a peripheral edge portion of the semiconductor substrate. A polishing unit polishes at least part of the plated metal film on the semiconductor substrate, and a transport mechanism transports the semiconductor substrate between the above units.

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